ABSTRACT

In the production of 2,2,3,3-tetrafluorooxetane by reaction of tetrafluoroethylene with a compound of formaldehyde generation source in anhydrous hydrogen fluoride, the reaction is carried out in the presence of polyfluoroalkylcarboxylic acid or polyfluoroalkyl ester thereof, represented by the following general formula RfCOORf' (where Rf is a polyfluoroalkyl group having 1-5 carbon atoms, and Rf' is a hydrogen atom or a polyfluoroalkyl group having 1-5 carbon atoms), preferably CF_3COOH, $CF_3COOCH_2CF_2CF_3$, or $CF_3COOCH_2CF_3$, whereby a high reaction yield can be attained.